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**Title:** *“Recent results in Index Theory in Celestial Mechanics”*

**Abstract.** Index Theory can be used in Celestial Mechanics both to study linear stability of some classes of periodic orbits and to compute the Morse Index of a huge classes of solutions. In this talk we will focus on some recent results, that give a necessary and sufficient condition for the finiteness of the Morse index of trajectories interacting with the singular set and provide an Index Theorem to link the Morse index to a finite dimensional symplectic invariant, the Maslov Index.

Joint work with Xijun Hu, Riccardo Jadanza, Alessandro Portaluri, Susanna Terracini.